

REMARKS

Claims 1-11 are now pending in this application. Claims 1, 3, and 5 are independent. Claims 1, 3, 5, 6, and 8 have been amended, claim 11 has been added, and no claims have been canceled by this amendment. No new matter is involved with any new claim or claim amendment.

Anticipation Rejection By Tateishi et al.

Withdrawal of the rejection of claims 1, 3, and 5-10 under 35 U.S.C. §102(b) as being anticipated by Tateishi et al. (US 5,025,434) is requested.

Applicant notes that anticipation requires the disclosure, in a prior art reference, of each and every limitation as set forth in the claims.¹ There must be no difference between the claimed invention and reference disclosure for an anticipation rejection under 35 U.S.C. §102.² To properly anticipate a claim, the reference must teach every element of the claim.³ “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference”.⁴ “The identical invention must be shown in as complete detail as is contained in the ...claim.”⁵ In determining anticipation, no claim limitation may be ignored.⁶

Discussion of Tateishi et al.

Tateishi et al. disclose a tracking servo apparatus for a disk player that includes off-track detecting means for detecting that an information reading spot of a pickup does not exist on an information recording track of a disk and for generating an off-track signal. Level control means are provided to increase an amplitude of a tracking error signal when the off-track signal exists.

¹ *Titanium Metals Corp. v. Banner*, 227 USPQ 773 (Fed. Cir. 1985).

² *Scripps Clinic and Research Foundation v. Genentech, Inc.*, 18 USPQ2d 1001 (Fed. Cir. 1991).

³ See MPEP § 2131.

⁴ *Verdegaal Bros. v. Union Oil Co. of Calif.*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

⁵ *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

⁶ *Pac-Tex, Inc. v. Amerace Corp.*, 14 USPQ2d 187 (Fed. Cir. 1990).

During an on-track mode, the track error (TE) signal is provided to a driver through an equalizing amplifier. When an off-track mode is used, a compensated TE signal is used which is set to the inherent TE signal in the on-track mode, i.e., the amplitude is increased to the peak level of the TE signal in the off-track mode. This peak value is stored in sample and hold circuit 3 (See col. 3, line 25 through col. 4, line 20 and FIGS. 1 and 3C).

Applicants submit that Tateishi et al. merely represents the conventional approaches discussed in the present application at least at paragraph [0024], and which reshape the TE signal to indirectly control the track locking motion of an optical pick-up head.

Deficiencies of the Applied Art

Specifically, the applied art does not disclose a track locking method for an optical disk drive, which includes, among other features, “generating a tracking servo output signal from a track error signal...determining an instantaneous level of the tracking servo output signal at the moment that the optical pick-up head was shifting to an adjoining off-track interval...and temporarily switching the optical pick-up head to an adjoining on-track interval after the optical pick-up head goes through half an off-track interval adjoining to the on-track interval of the target track”, as recited in independent claim 1, as amended.

The applied art discloses using the track error (TE) signal, but does not disclose deriving a track servo signal (TRO) from the TE signal as claimed, and the TE signal disclosed in the applied art is a signal indicative that the difference between the TRKA and TRKB signals (see col. 2, lines 32-35, and FIG. 1).

Further, the applied art does not disclose a track locking method for an optical disk drive which includes, among other features, “generating a tracking servo output signal from a track error signal...determining an instantaneous level of the tracking servo output signal...[and] intermittently holding the tracking servo output signal at the instantaneous level by using a pulse width modulated signal until the optical pick-up head moves to the on-track interval of the target track”, as recited in independent claim 3, as amended.

The applied art does not disclose use of a pulse-width modulation (PWM) circuit or technique, as claimed. The Examiner's interpretation that sample/hold circuit 3 in FIG. 1 of Tateishi et al. includes a pulse width modulation circuit is in error, and is not technically sustainable. Since the sample/hold circuit 3 disclosed in the applied art can not intermittently hold the level V_{HOLD} , the applied art is completely silent on PWM techniques or circuitry.

Finally, the applied art does not disclose a track locking apparatus for an optical disk drive that includes, among other features, "a controller that generates a tracking servo output (TRO) signal in response to a track error (TE) signal...[and] a switch configured to connect the tracking servo output signal to the signal-holding unit in response to arrival of an optical pick-up head of the optical disk drive at an adjoining off-track interval from the on-track interval", as recited in independent claim 5, as amended.

The applied art discloses using the track error (TE) signal, but does not disclose deriving a track servo signal (TRO) from the TE signal as claimed.

In addition, Tateishi et al. does not disclose a switch configured as claimed. In direct contrast, switch 2 in FIG. 1 of Tateishi et al. is closed by the low level on-track signal and relays the TE signal to the sample and hold circuit 3, and is opened by the high level off-track signal and does not relay the TE signal (see col. 3, lines 25-28). That is, switch 2 in FIG. 1 of Tateishi et al. only connects the TE signal to sample/hold (S/H) circuit 3 when the "on-track" condition is met, and **does not** connect the TE signal to the S/H circuit when the "off-track" condition is met.

Accordingly, since the applied art does not disclose all the claimed limitations of independent claims 1, 3, and 5, reconsideration and allowance of claims 1, 3, and 5 are respectfully requested. Further, since dependent claims 2, 4, and 6-10 variously and ultimately depend from their respective independent claims, allowance of these dependent claims is also requested.

Allowable Subject Matter

Applicants note with appreciation the indication that claims 2 and 4 are drawn to allowable subject matter, and would be allowed if rewritten in independent form.

However, given the distinguishing comments above with respect to independent claims 1 and 3 from which claims 2 and 4 depend, amendment of claims 2 and 4 is submitted as not being necessary for allowance.

Other Claim Amendments and New Claim

New dependent claim 11 has been drafted to avoid the applied art, and to further define that which Applicants regard as their invention. Claims 6 and 8 have been amended to improve readability. No new matter is involved with any claim amendment or new claim. Consideration and allowance of these claims are requested.

Conclusion

In view of the above amendment and remarks, Applicants believe that each of pending claims 1-11 in this application is in immediate condition for allowance. An early indication of the same would be appreciated.

In the event the Examiner believes an interview might serve to advance the prosecution of this application in any way, the undersigned attorney is available at the telephone number indicated below.

For any fees that are due, including fees for excess claims and extensions of time, the Director is hereby authorized to charge any fees or credit any overpayment during the pendency of this application to CBLH Deposit Account No. 22-0185, under Order No. 22171-00022-US1 from which the undersigned is authorized to draw.

Dated: December 8, 2006

Respectfully submitted,

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